*VIA FACSIMILE TRANSMISSION - Official*
*To Fax Number 571-273-8300*
*Application No. 08/879,467*
*December 16, 2005*

## REMARKS

With respect to section 5 of the Official Action, under part "a." at page 4, the Action states:

> "As shown in column 51, lines 39 – 41 and lines 58 – 62, a predetermined number of samples (!) are scanned and stored."
>
> (Emphasis added by Applicant)

The Official Action fails to recognize that the term "sample" in Postman (6,041,374) refers to a single logic state of the TTL level output signal on line 511, FIG. 23, as explained in the following passage at col. 34, lines 45 – 52:

> "Preferably, the serial card has the capability of taking a TTL level output signal on line 511 that transitions between logic 1 and logic 0 and place it on a pin of the PCMCIA bus connector 502 which is polled by the host computer 500 periodically. The host records the logic state at each sample time in a buffer on the host and uses the digital samples derived thereby to decode the alphanumeric characters that are encoded in the samples."
>
> (Emphasis Supplied)

In Section 5, part "a." at page 4 of the Official Action, the statement is made:

> "The scan rate can be any desired rate, but generally a rate of 200 scans per second is typical."

It is respectfully submitted that this statement does not support a rejection of the claims. Claim 19, for example, recites;

> "a non-dedicated second processing circuit, for coupling to the image buffer, that, after said plurality of undecoded images each representing information concerning a coded target as a whole, are stored in the image buffer, after a request by the capture system, and with the non-dedicated second processing circuit having received the plurality of undecoded images from

> the image buffer so as to have the plurality of undecoded images available at a time for processing, attempts decode processing of said plurality of undecoded images." (Emphasis Supplied)

Postman clearly processes only one image at a time to effect decoding thereof. Claim 19 requires the non-dedicated second processing circuit, having the plurality of undecoded images available at a time, attempts decode processing of said plurality of undecoded images (each image representing information concerning a coded target as a whole).

In Postman, if one image of a coded target is decoded, the laser scanning mechanism is powered down as shown at 162, FIG 6A. If attempted decoding of an image is unsuccessful, then another image is read, and decoding of the second image is attempted as explained in the following section.

**The Teaching of Postman Is To Process One Image At a Time for Attempted Decoding**

In Postman, it is stated at col. 13, lines 11 – 14:

> "Referring to FIG. 6A, there is shown a flow chart of the pertinent parts of the decoding process 118 carried out in the PC card in one subgenus. In another subgenus, the same or a similar decoding process takes place on the host." (Emphasis Supplied)

The Postman process flushes the data from a bad scan, and then prepares for the data from the next scan per Postman, col. 14, lines 61 – 67, reading as follows:

> "In order to flush the data from the bad scan, the bad read routine then retrieves the pointer to the start of the binary image recorded for the current scan by the process of box 130 and retrieves the length of the sequence of storage locations which store data defining the "image" from the routine symbolized by box 138. The bad read routine then flushes the image data from the bad scan and resets the

> pointer and image length variables/counters (depending upon whether hardware or software are used to keep track of where and how long the image is in memory 50). In embodiments where linked lists are used, the bad read routine retrieves the pointer to the start of the image and the locations where each member of the sequence is stored flushes the data for the binary image from the RAM 50 and resets the pointer and locations data to prepare for the data from the next scan. Processing then returns to box 120 on FIG. 6A to wait for the next scan data."
> (Emphasis Supplied)

## Claims 20, 21, 24, 26 – 30, 32 and 34 Are Similarly Entirely Distinct From the Teachings of Postman

Claim 20, and claims 24 and 26 –31, for example, are directed to coded image capture and decoding systems wherein the image buffer stores a plurality of undecoded images each representative of the same coded target, and the processing circuit is selectively directed to decode the plurality of undecoded images in conjunction with the other respective limitations of these claims.

Per col. 51 of Postman, lines 5 – 14:

> "The barcode image data samples generated by the PC card 776 are read by the host from a register or memory in the I/O space (or memory space in some embodiments) of the PC card and are transferred over the PCMCIA bus 48 through the PCMCIA bus controller 115 into a block of memory 778 in the host RAM 95 reserved to store the sample data. The sample data may be stored in RAM 95 directly by the PCMCIA bus controller circuit 115 via DMA transactions, or it may be read by the microprocessor 516 and stored in RAM 95."

It is absolutely clear that in Postman, only one complete barcode is stored in the barcode image data buffer 778, FIG. 37. Please refer to the following passage from Postman (col. 51 of Postman, line 58, to column 52, line 6):

> "Once the barcode client application has processed the interrupt(s) from the PC card and **knows that there is sample data from a complete**

> **barcode stored in the barcode image data buffer 778,** the barcode client application 786 invokes the barcode decode software routine 798 via data path 796. The barcode decode software routine then runs and accesses the barcode image data as symbolized by data path 780. The barcode decode routine then carries out processing identical or similar to that described in FIG. 6B. The details of the barcode decode routine are not critical to the invention and any known barcode decoding routine may be substituted for routine 798. After the alphanumeric character or characters are decoded from the image data, the character(s) are passed to the barcode client 786 for use or storage in the keyboard buffer or other storage area of the host as symbolized by block 782." (Emphasis Supplied)

See also the following passage from Postman column 7, lines 32 – 57:

> "The portable host 26 has a CPU and associated control program (not separately shown), a display 27 and possibly a keyboard. In one embodiment, the PDA is an Apple Newton Model 110 with a pen based display user input system. The CPU and associated control program of the portable host can do the decoding of the barcode in some embodiments such as the embodiments shown in FIGS. 23 and 24, but in the preferred embodiment, the decoding is done by a microprocessor on the PC card interface circuit 10. **Decoding of the barcode by the PDA CPU is done by reading digital data representing a "digitized image" of the barcode pattern** from a memory in the PC card 10 and analyzing the ratios between the lengths of the various light and dark spaces. The "digitized image" as that phrase is used herein for one dimensional barcodes means a string of logical 1's and 0's stored in sequential memory locations which encode the transition between light and dark and the relative spacing between these transitions as opposed to actual analog-to-digital conversion of the analog values of a video signal at a plurality of pixels." (Emphasis Supplied)

It is absolutely clear from the following passage of Postman (at column 13, line 66 to column 14, line 7, referring to FIG. 6A), that once a complete scan of a barcode has occurred, the scan data is either discarded if unsuccessful, or if successful, the laser scanner is powered down to await a new reading operation.

> "Box 132 represents the process of checking for transitions on line 4 indicating that barcode scanning is being performed by the laser scanning engine. If transitions are still occurring on line 42, path 134 is taken back to the process represented by box 128 to take the next sample. If no transitions have occurred for a period long enough to indicate that no

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barcode is being scanned, path 136 is taken to the decode step 138. **Path 136 is only taken once a complete scan of a barcode has occurred.**" (Emphasis Supplied)

**Claims 39, 40,43, 45, 46, 47, 49, and 50 Are Clearly Patentable Over Postman**

Referring to sections 6 and 7 of the Official Action beginning at page 9, claim 39 must be read with the following limitations of claim 32, for example:

> (c) said processing system thereby having available for decoding the received sets of undecoded data from a plurality of optical readings of the same code configuration and being operative to effect a decoding process that comprises utilizing the received sets of undecoded data from more than one optical reading of the same code configuration, to provide decoding of such code configuration.

The teaching of Postman is merely to discard a bad read, and then to process a further undecoded image. This has no anticipatory effect with respect to the totality of claims 39, 40, 43, 45, 46, 47, 49, and 50 including the above exemplary language from base claim 32.

**Claims 25 and 35 Are Clearly Patentable Over the Cited References**

Referring to section 8 of the Official Action at page 13, it is respectfully submitted there is no suggestion in the prior art of applying a teaching re picture image compression as in Park, to the bar code reading field as in Postman.

Further there is no teaching in Postman that a reference undecoded image and a plurality of further undecoded images could be decoded.

Claims 21 and 25, read together require:

> (d) a non-dedicated second processing system, for coupling to the image buffer, that, after said plurality of undecoded images each representing information concerning a coded target as a whole, are stored in the image buffer, after a notification to the non-dedicated second processing system of the presence of said plurality of undecoded images in the image buffer, and with the non-dedicated second processing system

> having the plurality of undecoded images available at a time for processing, attempts decode processing of said plurality of undecoded images. (Emphasis Supplied)

Such attempted decoding with the plurality of undecoded images available at a time for processing is not fairly taught by the two references.

Similarly, claims 32 and 35 read together require:

> (c) said processing system thereby having available for decoding the received sets of undecoded data from a plurality of optical readings of the same code configuration and being operative to effect a decoding process that comprises utilizing the received sets of undecoded data from more than one optical reading of the same code configuration, to provide decoding of such code configuration.

It is further totally beyond the teachings of the two references "to effect a decoding process that comprises utilizing the received sets of undecoded data from more than one optical reading of the same code configuration, to provide decoding of such code configuration", for example.

**Claims 33 and 52 Are Clearly Patentable Over the References Cited in Section 9 of the Official Action**

The Actis patent does not teach attempting "simultaneous decoding of at least two received sets of undecoded data based on at least two optical readings of the same optical code configuration," as recited in claim 33, but instead teaches e.g. at col. 5, lines 31-38, operating on the same sequence of digital words, or on different portions of the same sequence. Claim 52 is similarly directed to processing "more than one set of undecoded data representing more than one optical reading of the same optical code configuration".

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**Claims 36 Is Clearly Patentable Over the References Cited in Section 10 of the Official Action**

The official Action states at page 15, beginning at line 7, "It would have been obvious to one of ordinary skill ... to make a composite image from Postman's the predermined number of captured and stored images for decoding in the host"; however as explained in detail with reference to claim 32, Postman completely fails to teach "utilizing the received sets of undecoded data from more than one optical reading of the same code configuration, to provide decoding of such code configuration," as recited in clause (c) of claim 32. The premise for the proposed combination of references is thus clearly in error

**Claims 37 and 38 Are Clearly Patentable Over the References Cited in Section 11 of the Official Action**

Referring to section 11 of the Official Action beginning at page 15, claims 37 and 38 must be read with the following limitations of claim 32, for example:

> (c) said processing system thereby having available for decoding the received sets of undecoded data from a plurality of optical readings of the same code configuration and being operative to effect a decoding process that comprises utilizing the received sets of undecoded data from more than one optical reading of the same code configuration, to provide decoding of such code configuration.

As explained in detail with reference to claim 32, Postman completely fails to teach "utilizing the received sets of undecoded data from more than one optical reading of the same code configuration, to provide decoding of such code configuration," as recited in clause (c) of claim 32. Thus the cooperation of the additional limitations of claims 37 and 38 with the totality of the claims is completely lacking in the proposed combination of references.

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**Claims 19 and 20 Are Clearly Patentable Over the References Cited in Section 13 of the Official Action**

It is respectfully submitted that the proposed combination of references results in a system where bar code images at memory 17 of Tamura et al are stored as "plural groups of data"and then "read out from the memory 17 in each group and decoded" (per the English translation copyright 1990 by JPO and Japio), so that the combination of references points away from applicant's teaching of a plurality of undecoded images which are "available at a time for processing", (Claim 19). In Tamura et al. the successive images are from different bar codes 30, 31, and 32, Fig. 1, so that the combination of references points away from applicant's teaching of "selectively directing the processing circuit to decode the plurality of undecoded images each representative of said **the same** coded target" (claim 20).

**Allowable Subject Matter**

Applicant acknowledges with appreciation the indication of allowable subject matter in section 14 beginning at page 21 of the Official Action.

**CONCLUSION**

An earnest effort has been made to fully respond to the Official Action of 06/16/ 2005, and a favorable consideration and allowance of the claims as now presented is respectfully solicited.

Respectfully submitted,

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